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NEW MODELS ENTER GROWING SOVIET ROAD MACHINERY PARK

PRODUCTION HOLDS LEAD OVER PLAN -- Mekhanizatsiya Stroitel'stva, No 12,
Dec 49

The number of excavators produced during 1948 equalled the production of the entire 5-year period before the war. During the first half of 1949, production of road and construction machinery surpassed the figures for the same period in 1948 as follows: excavators, 2 times; scrapers, 2.4 times; bulldozers, 2.1 times; truck cranes, 1.7 times; graders, 1.5 times.

BUILD NEW SCRAPERS -- Mekhanizatsiya Stroitel'stva, No 2, Feb 50

The Plant imeni Kolyushenko, of the Ministry of Construction- and Road-Machine Building, has built experimental models of three high-capacity scrapers: the D-222, the D-213, and the D-188.

The first two scrapers, designed to be pulled by the S-80 tractor, are equipped with the D-148 two-drum winch. The D-188 works with a special tractor, and is equipped with a three-drum horizontal winch.

The following figures compare the new scrapers with the series-produced D-147 model.

<u>Specifications</u>	<u>D-222</u>	<u>D-213</u>	<u>D-188</u>	<u>D-147</u>
Weight, empty (kg)	6,600	8,500	15,750	6,600
Over-all length (mm)	8,800	9,800	10,925	9,140
Over-all width (mm)	2,900	3,240	3,500	3,150
Over-all height (mm)	2,945	2,940	3,100	3,350
Wheel base, shovel lowered (mm)	5,120	6,150	7,000	5,330
Volume of shovel (cu m)	7.0	10.0	15.0	5.7
Width of cut (mm)	2,590	2,850	3,154	2,590
Greatest depth of cut (mm)	300	300	370	300

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FIND ADVANTAGES IN SINGLE-AXLE DESIGN -- Vestnik Mashinostroyeniya, No 2,
Feb 50

The All-Union Scientific Research Institute of Construction- and Road-Machine Building has developed a new single-axle scraper, superior to two-axle models in several respects; it can load to full capacity on a shorter run, and it can cut to maximum depth almost at once.

Specifications are as follows:

Weight	1,800 kg
Dimensions	4,000 x 2,900 x 1,500 mm
Cutting width	1,650 mm
Maximum cutting depth	130 mm

GRADER-CONVEYER UNIT DOES WELL IN TESTS -- Mekhanizatsiya Stroitel'stva,
No 2, Feb 50

The Bryansk Road-Machinery Plant has put out a new conveyer-equipped grader, the D-192. It is to be used for constructing road and railroad embankments, digging ditches and canals, loading trucks, and other earth-moving operations.

Designed to be pulled by an S-80 tractor, the grader weighs 10 tons, has a wheelbase of 4 meters, a forward wheel-to-wheel width of 2.6 meters, and rear wheel-to-wheel width varying from 2.8 to 3.2 meters, depending upon the length of the conveyer. The conveyer, which extends to one side at a slight angle of elevation, may be lengthened from 6 to 8.5 meters; it is powered by a 1-MA motor, the type used in ASKhtZ-NATI tractors.

Earth to be transferred by the conveyer is scraped by two plough disks.

Theoretical productivity of the machine is 400 cubic meters per hour. During tests in September-October 1949, a maximum productivity of 420 cubic meters per hour was attained.

TESTS SHOW NEED FOR HEAVY EARTH COMPRESSORS -- Mekhanizatsiya Stroitel'stva,
No 11, Nov 49

The All-Union Scientific Research Institute of Road and Construction Machinery ran a series of tests with earth-compressing equipment to aid in determining future production needs in that field.

A vibration machine, a heavy kinetic tamper, and various types of rollers were used in the tests. The vibration machine consists of a metal plate on which is mounted an eccentric-type vibrating mechanism, driven by a 10-horsepower motor. The machine weighs 1,500 kilograms, and the width of the plate is 0.9 meters. The machine exerts a force of 5,000 kilograms. The kinetic tamper is mounted on the rear of an S-80 tractor. Reinforced concrete blocks weighing from 180 to 4,000 kilograms are hoisted up to 3 meters high along a vertical guide, and allowed to drop to the ground.

Conclusions

The cheapest and most productive earth compressors are heavy sheeps-foot rollers and heavy rubber-tired rollers. The use of the average size sheeps-foot roller, which weighs 4-6 tons, is most effective when working on a loose layer of earth up to 35 centimeters' thick.

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The most effective earth tamping is achieved by using the kinetic tamper, which compresses to a maximum depth of 1.5 meters. Best results are obtained with this machine when using the tamping block of 2.5 tons, from a height of 2 meters. When working with earth having a loose-soil binder, the vibration machine is the best compressing device.

To answer the requirements indicated by the experiments, production should be launched on the following earth-compressing equipment: self-propelled sheeps-foot rollers; towed rollers weighing 25-35 tons; rubber-tired rollers weighing 100 tons; multiple-section mallet tamping machines; and self-propelled vibration machines.

BIG ROLLER GOES INTO SERIES PRODUCTION -- Moskovskaya Pravda, No 26, 21 Mar 50

The Ministry of Construction and Road-Machine Building has built an experimental model of a trench hoe with a productivity of 90 cubic meters per hour. It will be particularly efficient in digging cable beds.

A 30-ton trailer roller is now in series production. The heaviest made, it will be used in building up roadbeds.

EARTH MOVERS GET HYDRAULIC PUMPS -- Mekhanizatsiya Stroitel'stva, No 2, Feb 50

The Osipenko Road-Machinery Plant of the Ministry of Construction and Road-Machine Building, has completed a series of pumps, designated UG-1M, to be used on the hydraulic mechanisms of the D-183 scraper and the D-159 bulldozer.

The Nikolayev Road-Machinery Plant is series-producing the NU-54 pump for hydraulic systems on D-106 scrapers.

LOADERS GO INTO SERIES PRODUCTION -- Sovetskaya Kirgiziya, No 65, 1 Apr 50

The Bryansk Road-Machinery Plant has begun series production of the T-61 conveyor loader, designed to handle sand, gravel, coal, peat, and other dry material. Widely used in road construction, the loader has a productive capacity of 100 cubic meters per hour.

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